

REMARKS

By this amendment, claims 11-15 have been amended. Accordingly, claims 11-15 are currently pending in the application, of which claims 11 and 15 are independent claims.

Entry of the Amendments and Remarks is respectfully requested because entry of Amendment places the present application in condition for allowance, or in the alternative, better form for appeal. No new matters are believed to be added by these Amendments.

In view of the above amendments and the following Remarks, Applicant respectfully requests reconsideration and timely withdrawal of the pending objections and rejections for the reasons discussed below.

Title Objection

In the Office Action, the title of the invention was objected to as not being descriptive. The title has been amended to read --PIXEL ELECTRODE STRUCTURE FOR LIQUID CRYSTAL DISPLAY--. Applicant believes that this new title is clearly indicative of the invention to which the claims are directed. Thus, withdrawal of the objection is respectfully requested.

Specification Objection

In the Office Action, the specification was objected to for the information in the "Cross Reference" section is not updated. In this response, the specification has been amended to update the "Cross Reference" section. Thus, withdrawal of the objection is respectfully requested.

Rejections Under 35 U.S.C. §103

Claims 11, 12 and 15 stand rejected under 35 U.S.C. §103(a) as being unpatentable over Applicant's Admitted Prior Art ("AAPA") in view of Japanese Patent Publication No. 10-288794 issued to Hiroshi ("Hiroshi"). Applicant respectfully traverses this rejection for at least the following reasons.

The Examiner admitted "AAPA differs from the claimed invention because it does not explicitly disclose that the pixel electrode covers the entire width of the storage capacitor electrode at particular regions" (Office Action, page 3). Regarding this missing feature, the Examiner stated "Hiroshi discloses a liquid crystal display wherein the pixel electrode (105) covers the entire width of the storage capacitor electrode (106) ... at particular regions (Fig. 6)" (Office Action, page 3). Based on these two pieces of prior art, the Examiner stated "Hiroshi is evidence that ordinary workers in the art ... would find a reasons, suggestion or motivation to cover the entire width of the storage capacitor electrode with the pixel electrode at particular regions" (Office Action, page 3). This assertion is respectfully disagreed with.

In this response, independent claim 11 has been amended to recite "*the storage capacitor electrode is extended along an edge of the pixel region, and the pixel electrode entirely covers a portion of the storage capacitor electrode*". Obviously, AAPA does not disclose or suggest this claimed feature.

Fig. 12 of Hiroshi shows a top view of the LCD structure shown in Fig. 6. As shown therein, the storage capacitor electrode 106 is horizontally crossing the pixel region to form a storage capacitance with the overlying pixel electrode 105. However, Hiroshi does not show the claimed "storage capacitor electrode" that is "connected to the storage capacitor line" and "*extended along an edge of the pixel region*", as claimed. Particularly, Hiroshi shows no motivation why the structure of AAPA should be modified such that "the pixel electrode

entirely covers a portion of the storage capacitor electrode”, as claimed. Thus, it is submitted that claim 11 is patentable over AAPA and Hiroshi. Claim 12 that is dependent from claim 11 would be also patentable at least for the same reason.

Independent claim 15 has been also amended to recite “a storage capacitor line having a main portion and *a branch portion extended from the main portion ...*, the branch portion *extended along an edge of the pixel region ...* wherein the pixel electrode *entirely covers a portion of the branch portion*”. As previously mentioned, none of the cited references shows any motivation to modify the structure of AAPA such that “the pixel electrode entirely covers a portion of the branch portion”, as claimed. Thus, it is submitted that claim 15 is patentable over AAPA and Hiroshi.

Accordingly, Applicant respectfully requests withdrawal of the 35 U.S.C. §103(a) rejection of claims 11, 12 and 15.

In the Office Action, claims 11, 12 and 15 stand rejected under 35 U.S.C. §103(a) over AAPA in view of U. S. Patent No. 6,512,565 issued to Lee, et al. (“Lee”). This rejection is respectfully disagreed with.

Lee is directed to a Vertically Aligned (VA) In-Plane Switching (IPS) type LCD device, in which the pixel electrode 27 and the counter electrode 23 (i.e., common electrode), which is usually formed on a color filter substrate, are formed on the same substrate. The counter electrode is connected to the common signal line 230. Thus, there is no storage capacitance line in the VA-IPS TFT LCD structure shown in Fig. 4. Particularly, Lee fails to show the claimed “storage capacitor electrode” that is “connected to the storage capacitor line” and “*extended along an edge of the pixel region*”. Thus, Lee shows no motivation why the structure of AAPA

should be modified such that “ the pixel electrode *entirely covers a portion of the storage capacitor electrode*”, as claimed. For these reasons, it is submitted that claim 11 is patentable over AAPA and Lee. Claim 12 that is dependent from claim 11 would be also patentable at least for the same reason.

Independent claim 15 recites “a storage capacitor line having a main portion and a *branch portion extended from the main portion ...*, the branch portion *extended along an edge of the pixel region ...* wherein the pixel electrode *entirely covers a portion of the branch portion*”. As previously mentioned, none of the cited references shows any motivation to modify the structure of AAPA such that “the pixel electrode entirely covers a portion of the branch portion”, as claimed. Thus, it is submitted that claim 15 is patentable over AAPA and Lee.

Accordingly, Applicant respectfully requests withdrawal of the 35 U.S.C. §103(a) rejection of claims 11, 12 and 15.

Claim 13 stands rejected under 35 U.S.C. §103(a) as being unpatentable over AAPA in view of Hiroshi and further in view of U. S. Patent No. 6,252,643 issued to Song (“Song”). This rejection is respectfully traversed.

Claim 13 stems from claim 11. As previously mentioned, amended claim 11 is patentable over AAPA and Hiroshi because, for example, they have no motivation to modify the structure of AAPA such that “the pixel electrode *entirely covers a portion of the storage capacitor electrode*”, as claimed.

Song is directed to a plurality of row terminals and column terminals arranged on one side of two adjacent sides of a substrate and a plurality of column terminals and common electrode terminals arranged on the other side of the two adjacent side of the substrate. However,

Song does not disclose or suggest “the pixel electrode *entirely covers a portion of the storage capacitor electrode*”. Thus, claim 11 is patentable over AAPA, Hiroshi and Song. Claim 13 that is dependent from claim 11 would be also patentable at least for the same reason.

Accordingly, Applicant respectfully requests withdrawal of the 35 U.S.C. §103(a) rejection of claim 13.

Claim 13 stands rejected under 35 U.S.C. §103(a) over AAPA in view of Lee and further in view of Song. This rejection is respectfully traversed.

As previously mentioned, amended claim 11 is patentable over AAPA and Lee because, for example, they have no motivation to modify the structure of AAPA such that “the pixel electrode *entirely covers a portion of the storage capacitor electrode*”, as claimed. Also, as mentioned above, Song does not disclose or suggest “the pixel electrode *entirely covers a portion of the storage capacitor electrode*”. Thus, claim 11 is patentable over AAPA, Lee and Song. Claim 13 that is dependent from claim 11 would be also patentable at least for the same reason.

Accordingly, Applicant respectfully requests withdrawal of the 35 U.S.C. §103(a) rejection of claim 13.

Rejection Under Non-Statutory Double Patenting

Claims 11-15 stand rejected under the judicially created doctrine of obviousness type double patenting as being patentable over claims 1-4 of U. S. Patent No. 6,614,492. This rejection is respectfully traversed.

As previously mentioned, independent claim 11 has been amended to further recite “wherein the storage capacitor electrode is extended along an edge of the pixel region”. Claim 15

has been also amended in a similar manner. This feature is not described in claims 1 and 5 of U. S. Patent No. 6,614,492. Also, this claimed feature is patentably distinct from claims 1 and 4 of U. S. Patent No. 6,614,492, which are directed to how the opening portions of the pixel electrode are configured. Thus, withdrawal of the rejection is respectfully solicited.

Other Matters

In addition to the amendments mentioned above, claims 11-15 have been amended solely for the purposed of clarification, informality correction and better wording.

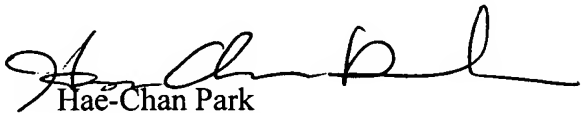
CONCLUSION

Applicant believes that a full and complete response has been made to the pending Office Action and respectfully submits that all of the stated objections and grounds for rejection have been overcome or rendered moot. Accordingly, Applicant respectfully submits that all pending claims are allowable and that the application is in condition for allowance.

Should the Examiner feel that there are any issues outstanding after consideration of this response, the Examiner is invited to contact the Applicant's undersigned representative at the number below to expedite prosecution.

Prompt and favorable consideration of this Reply is respectfully requested.

Respectfully submitted,


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